HEALTH WEALTH CAREER

LONDON BOROUGH OF HARINGEY PENSION FUND

INVESTMENT STRATEGY CONSIDERATIONS

December 2016

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EXECUTIVE SUMMARY

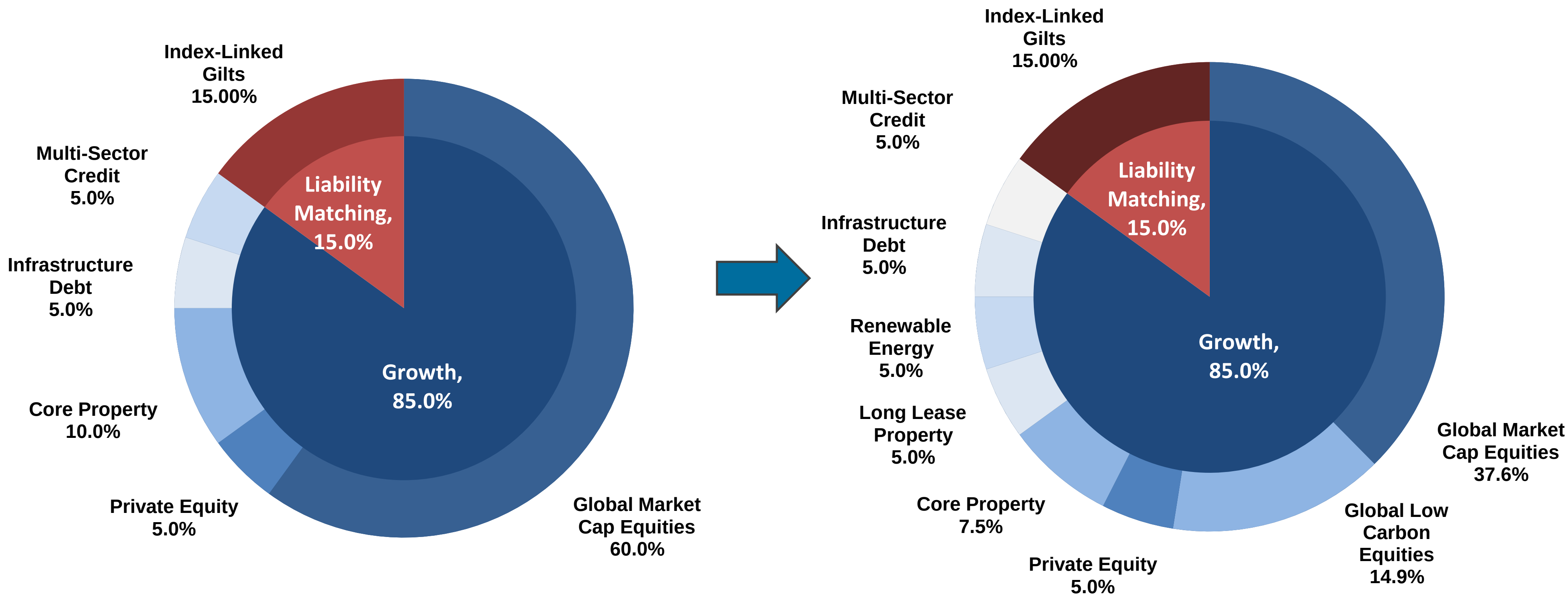
- There are strong grounds for undertaking an **investment strategy review**:
  - In light of new Actuarial Valuation
  - Increased levels of market and geo-political uncertainty post Brexit vote, US election etc
- The Fund has made good progress to diversify the assets, but remains heavily reliant on equities for return. **Given market uncertainty and the relatively high valuation of equities, there is a good case to consider further diversification.** Possible areas of interest identified include:
  - Hedge Funds
  - Multi-Asset Absolute Return
  - Direct Lending / Private Debt

  Further consideration would need to be given to the allocations to a new asset class as part of an investment strategy review. **As a guide, we would have in mind an allocation of between 5% and 10% of Fund assets (tbc).**

  - Equity Protection – this would act as an overlay strategy with no benchmark allocation
- There are also strong grounds to consider introducing **currency hedging** to the Fund's developed overseas equities in order to lock in exceptional gains from sterling depreciation and reduce risk versus the Fund's sterling based liabilities
- **Inflation expectations** have increased significantly. This represents a material risk to the Fund due to the inflation linkage within the liabilities. Does the current strategy provide sufficient protection?

BACKGROUND

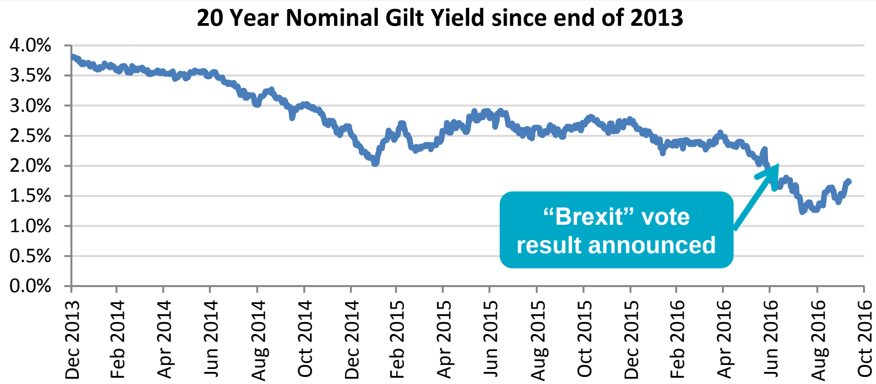
INVESTMENT STRATEGY

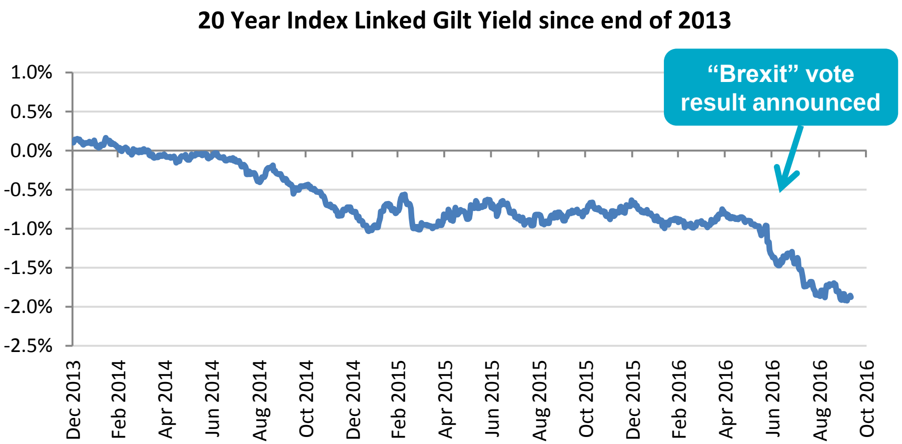


- The Committee has made good steps to diversify the Fund's investment strategy and sources of return but equities will still be the major driver of returns
- Equities will account for 52.5% of the assets, but it will take some time for allocations to Renewable Energy (c.3 to 4 years) and Long Lease Property (c. 1 year) to be fully invested
- The Committee has asked Mercer to consider other ideas to reduce the "directionality" of the assets that could help mitigate against increased market volatility and protect against potential downside in equity markets

THE IMPACT OF BREXIT ON MARKETS

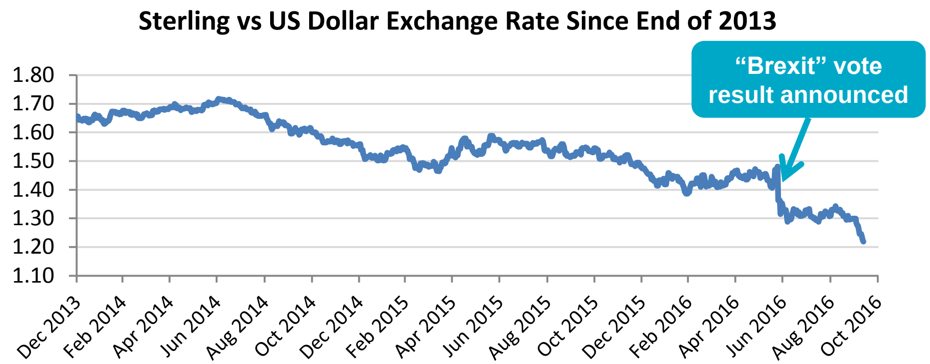
1) Large fall in gilt yields
(which has boosted gilt returns, but increased liabilities)

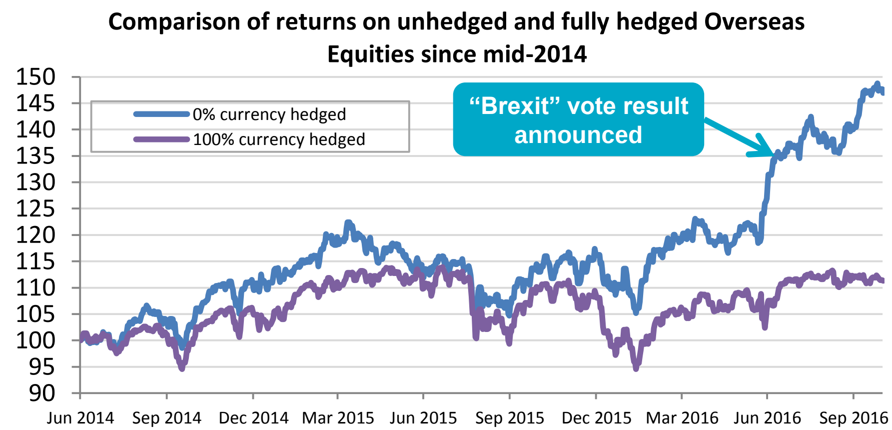




➔ **Negative impact for the Fund**

2) Depreciation of sterling
(which has boosted unhedged overseas growth assets)



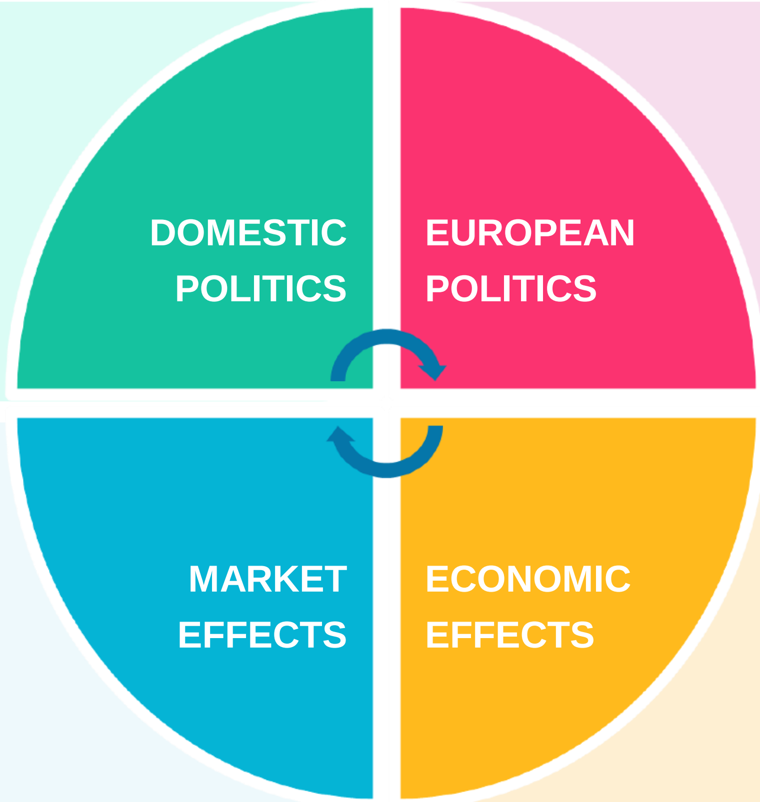


➔ **Positive impact for the Fund**

KNOWN UNKNOWNS
BREXIT & OTHER RISKS

- General election?
- UK's negotiating stance?
- Scottish referendum?
- Irish referendum?

- EU negotiating stance?
- Calls for referenda in other countries?
- Elections in Germany, France and Netherlands in 2017 and a constitutional referendum in Italy (December 2016)



- Markets remain fragile due to heightened uncertainty and reduced liquidity
- Policy-maker response will also be important (i.e. monetary and fiscal policy)

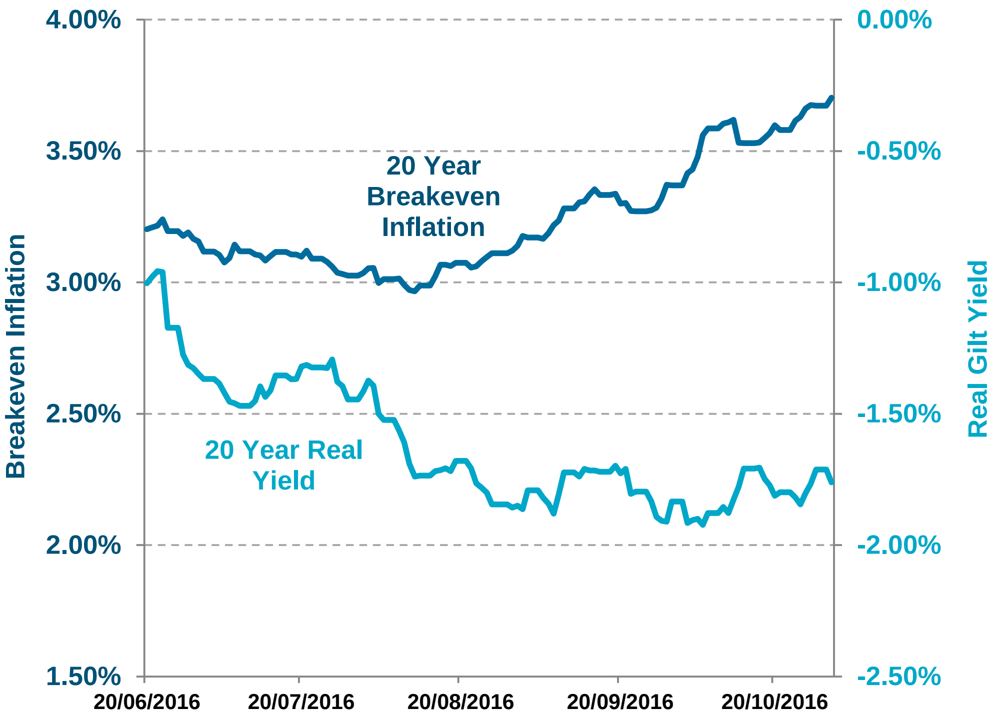
- Increased risk of economic slow-down in UK economy in the short to medium term?
- Longer-term effects of Brexit much harder to predict

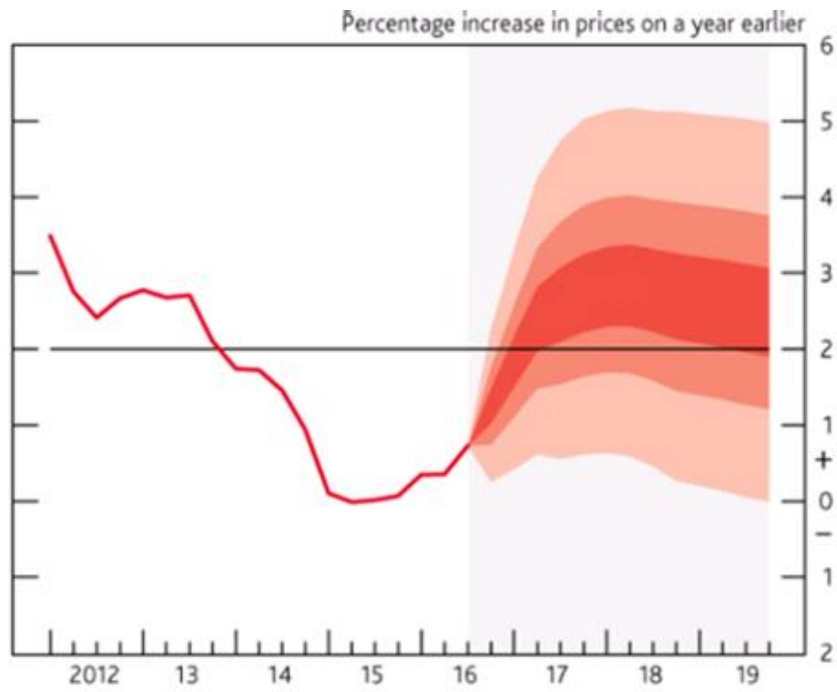
US Election / Trump

Slowing Chinese growth?

Divergent central bank monetary policy

INFLATION EXPECTATIONS ON THE RISE



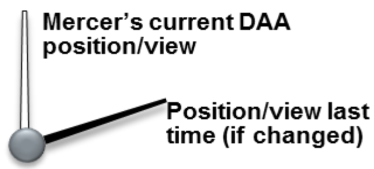


Bank of England Inflation Expectations

- Rising inflation (actual and expected) will increase the value of the benefit cash flows and the value placed on the liabilities
- Does the current investment strategy provide sufficient protection?

MEANWHILE EQUITIES ARE NEAR ALL TIME HIGHS
A GOOD TIME TO REDUCE EXPOSURE?

- Extremely Unattractive
- Unattractive
- Neutral
- Attractive
- Extremely Attractive



DEVELOPED MARKET EQUITIES

EMERGING MARKET EQUITIES

GLOBAL SMALL CAP

WAYS OF ACHIEVING DOWNSIDE PROTECTION

Managing Equity Risk

De-risk

- The simplest method of controlling equity risk is to reduce the allocation to equities
- However, many investors, including the Fund, require a substantial equity allocation to help maintain the required expected return, making wholesale de-risking impractical in the near term.
- But….deficit risk could be controlled better by applying leverage to the existing Index-Linked Gilts
- Can be done via L&G

Diversify

The most common approach to managing equity risk and has been the approach used by the Fund through the allocations to **Multi-Asset Credit, Long Lease Property, Infrastructure Debt** and **Renewable Energy**

Other approaches that could be considered:

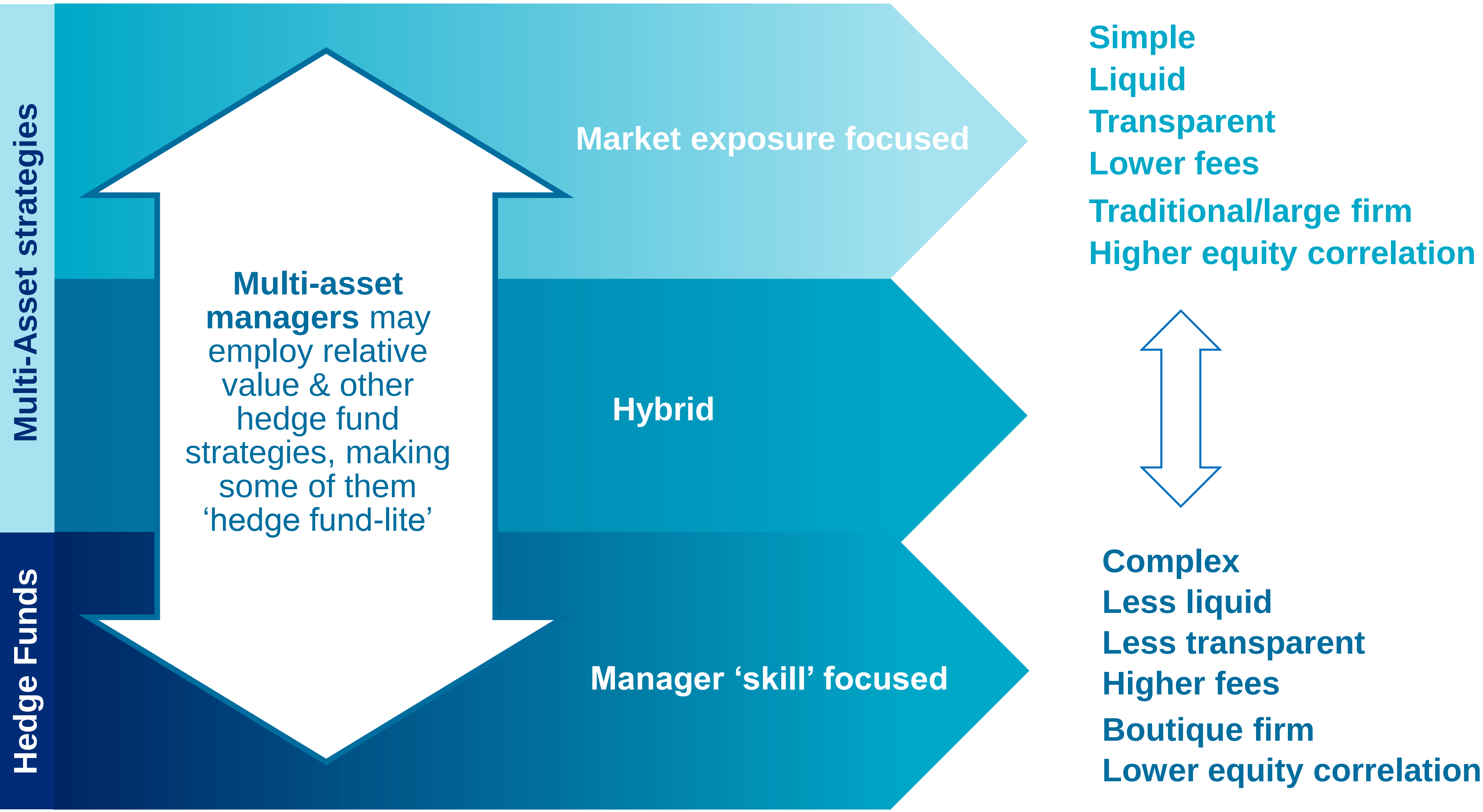
- Hedge Funds
- Multi-Asset Absolute Return (sometimes known as Diversified Growth Funds)
- Some options for the latter are available with the London CIV

Hedge (options)

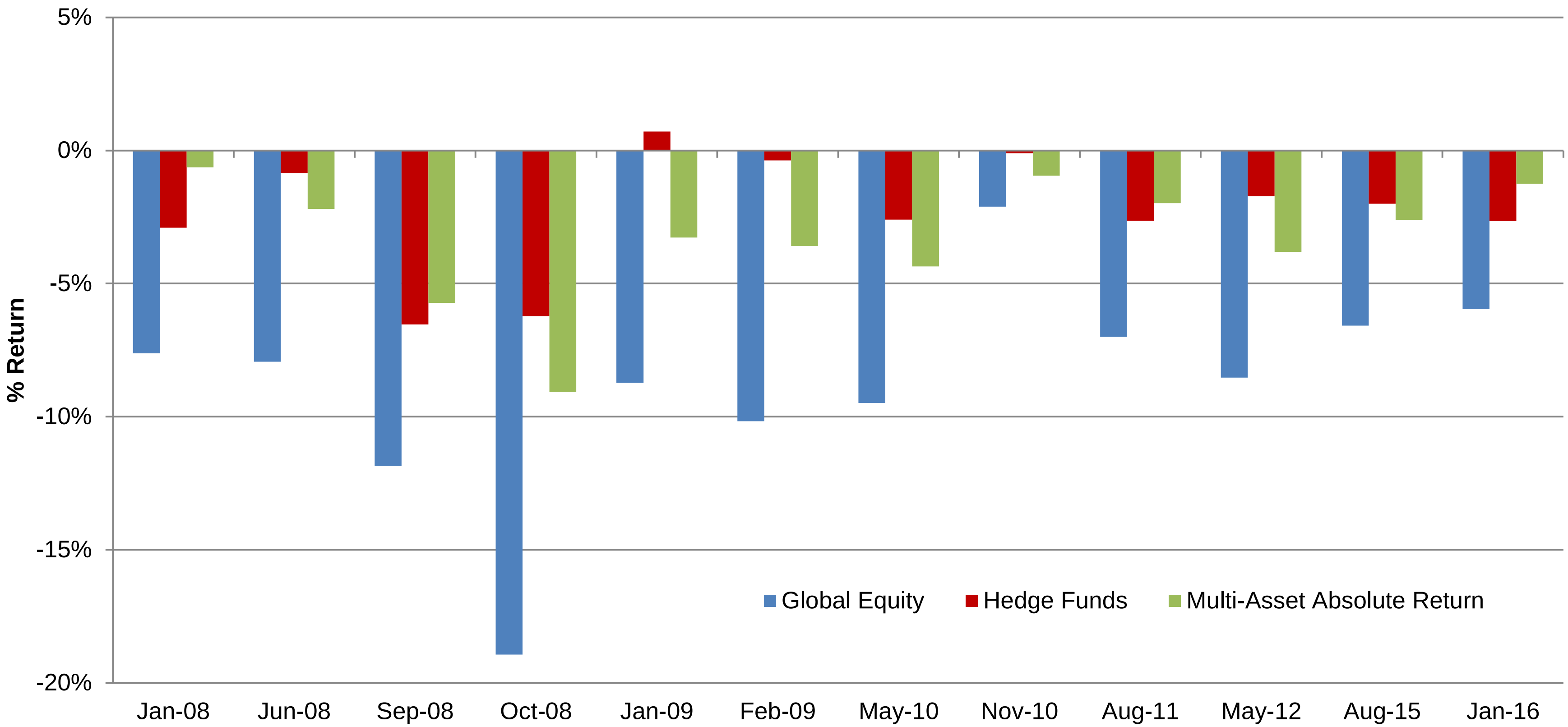
- Equity hedging involves tailoring the risk and return profile of the equity allocation to meet an investor's objectives
- This typically involves the use of derivatives to increase the predictability of the return profile in future market conditions
- Now easier to implement for LGPS given new investment regulations
- Bespoke strategy, so not appropriate for pooling
- Could be done via L&G

HEDGE FUNDS & MULTI-ASSET ABSOLUTE RETURN

MULTI-ASSET STRATEGIES VS. HEDGE FUNDS
SIMPLIFIED OVERVIEW



PROTECTION IN EQUITY DOWN MARKETS



- Both Multi-Asset Absolute Return and Hedge Fund strategies should provide downside protection during periods of equity market stress
- The chart above shows the performance of these two strategies during the worst 12 months for global equity markets in the past decade (to March 2016).
- Largely, both strategies are able to minimise losses even during periods where equity markets see double digit declines.

HEDGE FUNDS
OVERVIEW

Risk / Return Drivers:

- *Low-Moderate Equity Risk Premium*
- *Low-Moderate Small Cap Premium*
- *Low-Moderate Term Premium*
- *Low-Moderate Credit Risk Premium*
- *Moderate Illiquidity Premium*
- *High Alpha Potential*

WHAT IS IT?

- We do not think of hedge funds as an asset class, rather as a collection of heterogeneous investment strategies which can be utilised to gain exposure to a variety of non-traditional risks ("hedge fund risks").

WHY INVEST?

- Forward looking potential for market returns is weak
- Investors are increasingly seeking a greater contribution from "alpha" to capitalise on policy divergence, rising dispersion, continued M&A activity and maturity of credit / default cycle

EXPECTED BENEFITS

- Potential to generate returns with less volatility than public equity markets
- Improve diversification
- Access strategies likely to assist in downside protection / non-traditional sources of return

MAIN DRAWBACKS

- Liquidity depends on implementation
- Complexity / opaqueness
- High fees
- Active risk

WHAT ARE HEDGE FUNDS?
THE HEDGE FUND TOOL BOX

HEDGE FUNDS

LONG/SHORT

- Hedge funds have the ability to invest both long and short
- Taking long positions in stocks that are expected to appreciate and short positions in stocks that are expected to decline
- Short selling enables a strategy to profit from a position that is expected to decline in value

MANAGER SKILL

- Hedge funds are more reliant on investment manager skill (successful active management) than the direction of markets in general
- Returns are less reliant on market direction and should be more consistent over time

ABSOLUTE RETURN

- Hedge funds focus on “absolute return” rather than performance relative to a specific benchmark

LEVERAGE

- Hedge funds have the ability to borrow
- Applying leverage enables a strategy to amplify position sizing to exploit opportunities in a more sizeable manner however this flexibility needs to be managed carefully

INVESTMENT FLEXIBILITY

- Hedge funds have few restrictions on asset classes and investment techniques they can employ
- However, most hedge funds do tend to specialise in a particular market/strategy.

WHAT ARE HEDGE FUNDS?
THREE MAIN "TYPES"

- **Multi-strategy Funds**

Multi-Strategy

Expected to produce more consistent returns due to diversification across strategies, plus the ability to shift allocations between strategies as the opportunity set changes

- **Focused Single Strategies**

Long/Short Equity	**Event Driven**
Global Macro	**Credit Opportunity**

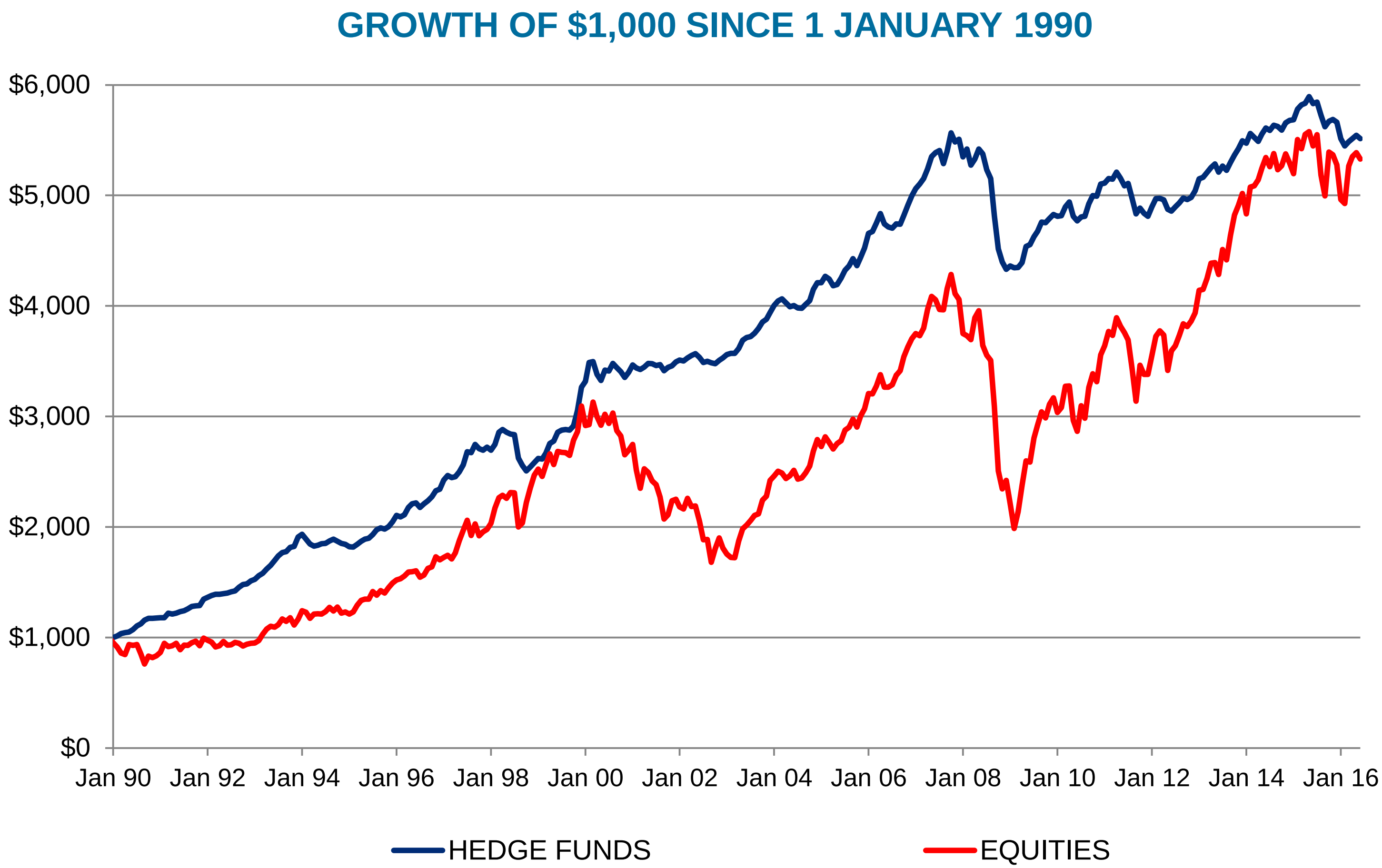
Expected to produce strong returns over a full cycle, but with less consistency than you would see with Multi-strategy Funds

- **Hedging Strategies**

Tail Risk Hedging	**Managed Futures**

Expected to be useful diversifiers against systemic risk, but with lower long term expected returns

WHY CONSIDER?
EQUITY-LIKE RETURNS BUT LOWER VOLATILITY



Hedge Fund
- Return: 6.9% p.a.
- Volatility: 5.6% p.a.
- Sharpe 0.7

Equities
- Return: 6.6% p.a.
- Volatility: 15.1% p.a.
- Sharpe 0.2

Source: Thomson Reuters Datastream
From January 1990 to June 2016

DIVERSIFIED GROWTH FUNDS
BROAD STYLES

Core Diversified

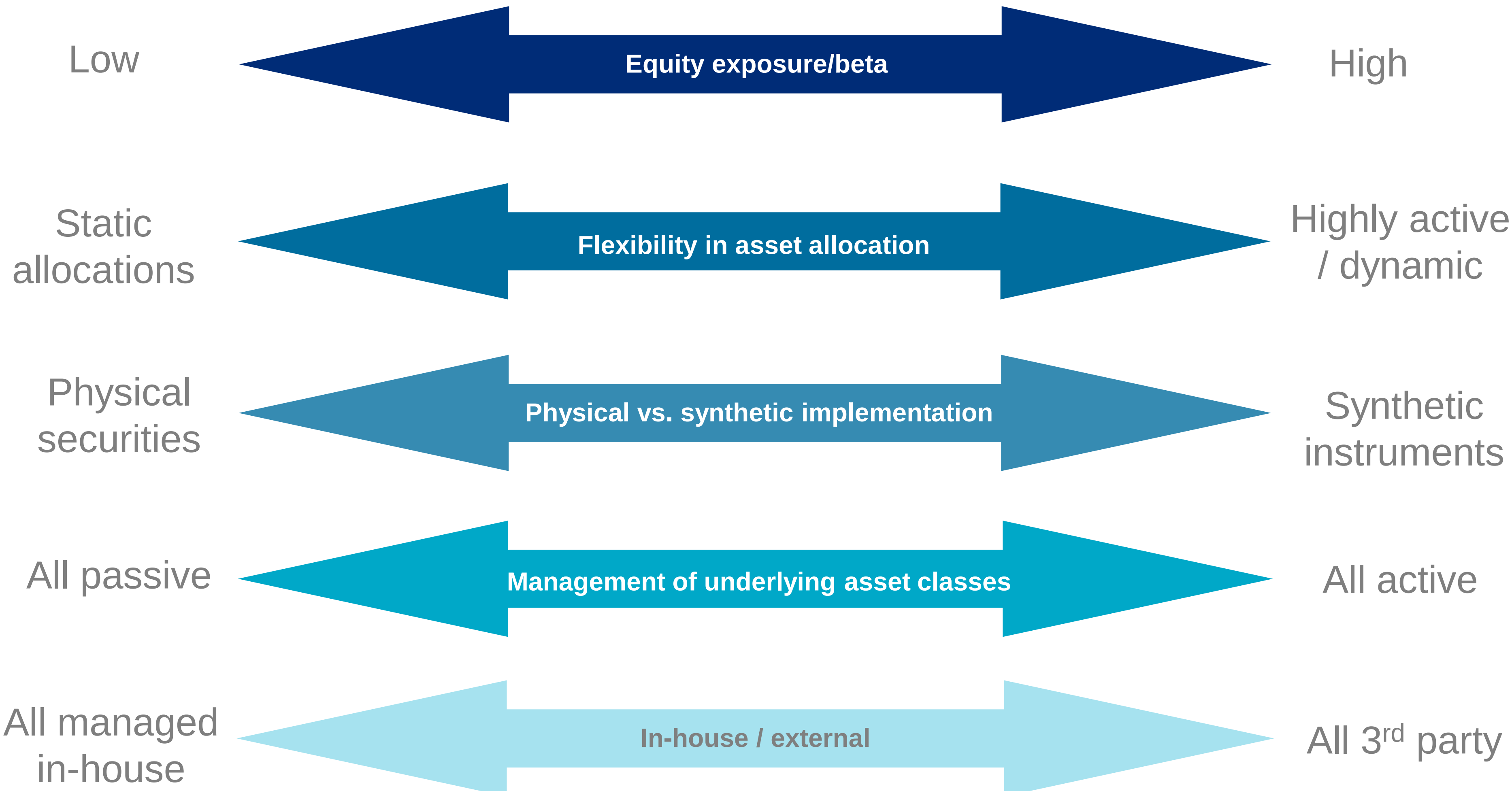
- Reliant on a fairly consistent, diverse range of market returns
- Transparent and easy to understand
- May aim to be a growth portfolio solution (i.e. deliberately retain material equity exposure)

Multi Asset Absolute Return
(also known as Idiosyncratic DGFs)

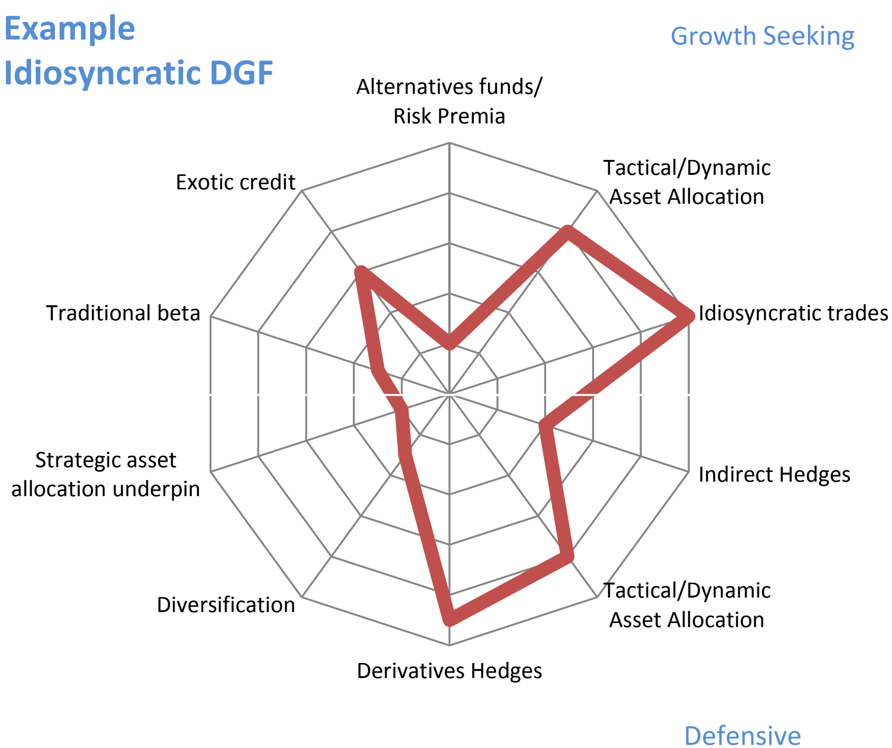
- Significant emphasis on Tactical Asset Allocation and / or specific trade ideas
- Often use derivative based trades
- **Typically less correlated with equities**
- Usually includes a specific focus on **downside protection and capital preservation**

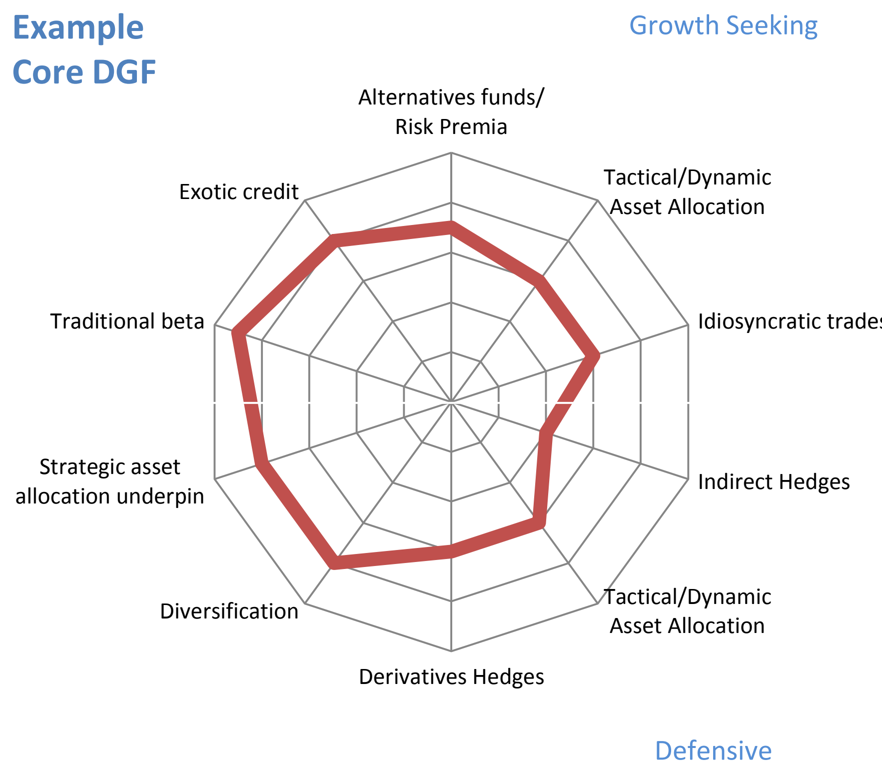
KEY VARIABLES ACROSS STRATEGIES

Below we highlight some of the key ‘strands’ of differentiation between Multi Asset strategies



TYPICAL CHARACTERISTICS





- Strategies typically target equity-like returns but with lower risk (often between 1/3 to 2/3 of equity risk).
- Idiosyncratic DGFs have stronger biases to the right hand side of the “spider webs”. They are multi-asset strategies with a predominantly long bias, with emphasis on dynamic asset allocation and idiosyncratic trade ideas.
- Idiosyncratic DGFs should provide more downside protection, have lower correlation to equities and lower volatility compared with ‘core’ diversified growth funds, and are therefore more likely to be appropriate given the Fund’s objectives.

HEDGE FUNDS VERSUS MULTI-ASSET SCORECARD

Attributes		Hedge Funds	Multi-Asset	Comments for discussion
Financial considerations	Return potential	M	M	Expected returns for both strategies typically slightly lower than equities
	Returns efficiency	H	H	Higher level of expected return for level of risk than equities for both strategies
	Portfolio diversification	H	M	Some correlation to equity / credit markets but the Fund would aim to keep this relatively low through appropriate manager selection
	Alpha potential	H	M	By definition, high reliance on active management
	Costs	H	M	Hedge Funds typically have higher fees (e.g. 1% to 2.0% p.a.) with performance fee element (e.g. 20% above a hurdle). Multi-Asset strategies typically lower cost (c. 0.5% to 0.8% p.a.), with no performance fee
Capital / risk considerations	Downside / tail risk	M-H	M-H	Depends on level of diversification in portfolio
	Liquidity	M	H	Dependent on vehicle for accessing hedge funds – can be lock up clauses, provision for gating. Multi-Asset strategies typically weekly or monthly dealt
Implementation / governance considerations	Complexity	H	L - M - H	Complexity is very much manager specific
	Ease of implementation	M	H	Need for allocation to multiple hedge fund strategies to efficiently implement. DGFs typically lower requirements
Overall rating				Both options have high potential efficiency and good diversification benefits relative to the current return seeking assets. Hedge funds are more complex, expensive and illiquid, however.

H High **M** Medium **L** Low Favourable Neutral Unfavourable

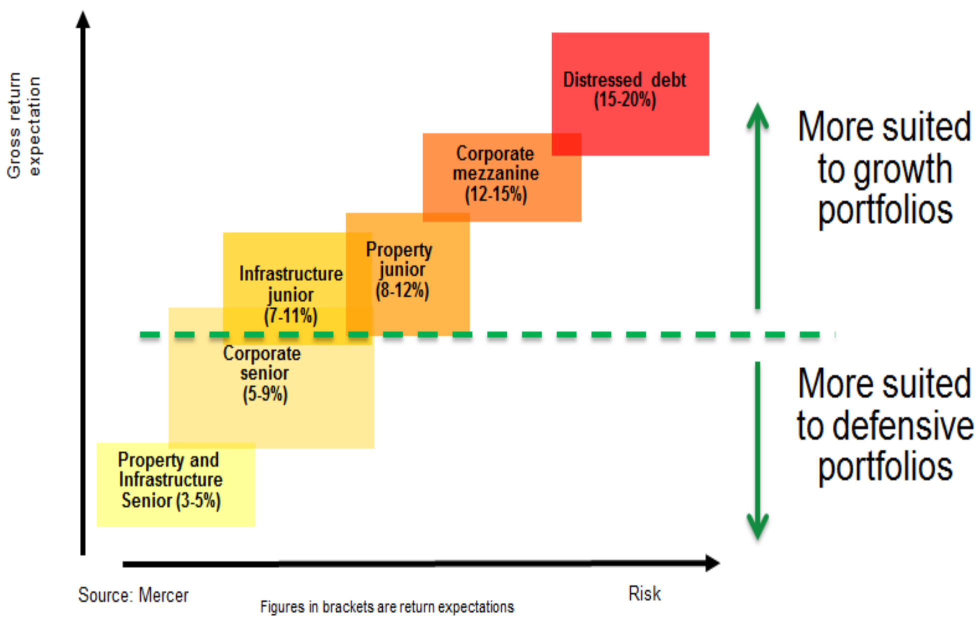
PRIVATE DEBT/ DIRECT LENDING

WHAT DO WE MEAN BY PRIVATE DEBT?

- “Private Debt” is a broad term that refers to any investment in privately negotiated debt.
- Borrowers often choose private debt financing because it can be customised to their specific needs or when public debt is not available to them.
  - ✓ Corporate private debt: Direct lending to private companies.
  - ✓ Real estate debt: Provision of finance for commercial real estate asset acquisitions, a form of asset backed lending.
  - ✓ Infrastructure private debt: Provision of debt to infrastructure companies. **The Fund currently has exposure to infrastructure debt through the Allianz mandate**. **We would consider this to be a low risk Private Debt strategy**
- Return opportunity in Private Debt markets started to gain interest from institutional pension funds post the Global Financial Crisis in 08/09, as Banks withdrew lending capital from markets.
- Asset class is now considered to be more “strategic” for long-term investors, such as the LGPS
- Liquidity can vary from around 3 months to 15 years, depending on the underlying assets.

WHAT DO WE MEAN BY PRIVATE DEBT?

- Given the Fund's return requirements and existing exposures, we would expect the higher return forms of Private Debt to be potentially most additive to the current investment strategy but the risks would need to be clearly understood



Source: Mercer

Private Debt	
Return Expectation	Cash plus 8% (net of fees)
Primary Focus	Junior/Mezzanine

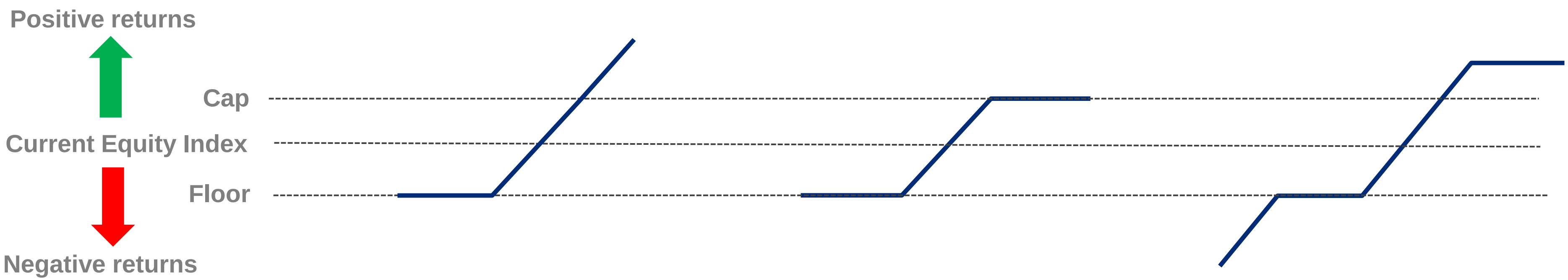
Senior Private Debt	
Return Expectation	Cash plus 1 - 3% (net of fees)
Primary Focus	Senior

UNDERSTANDING PRIVATE DEBT
COMPARISON WITH OTHER FORMS OF DEBT

Investment category	Multi-Asset Credit	Defensive Private Debt	Growth Private Debt
Return premium over cash (net of fees)	Moderate to High	Moderate to High	High
Inflation hedge	Low	Low	Low
Interest rate exposure	Low to Moderate	Low to Moderate	Low to Moderate
Credit exposure	High	High	High
Market to market volatility	Moderate	Moderate	High
Ease of implementation	High	Low to Moderate	Low to Moderate
Liquidity	Moderate	Low to Moderate	Low to Moderate
Alpha potential	High	High	High
Fees	Moderate	High	High

EQUITY PROTECTION STRATEGIES

EQUITY DOWNSIDE PROTECTION
TYPICAL PROTECTION STRATEGIES



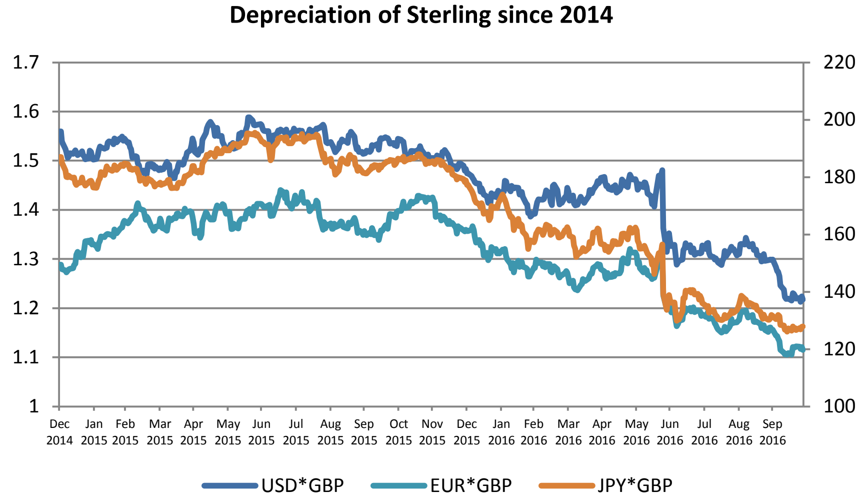
	Put Option	Vanilla Collar	Put spread Collar
Example Portfolio	Buy downside protection	Buy downside protection, sell upside to offset the cost	Buy downside protection, sell upside to offset the cost but participate in downside beyond a certain level to achieve greater upside potential
Rationale	• Participation in all upside potential • Key drawback is the cost of the protection (i.e. like an insurance contract)	• Gains above a certain level may not be required (i.e. if the Plan is fully funded) • Can be structured to be zero cost	• Gain extra upside compared to a vanilla collar by only capping downside loss to a given point

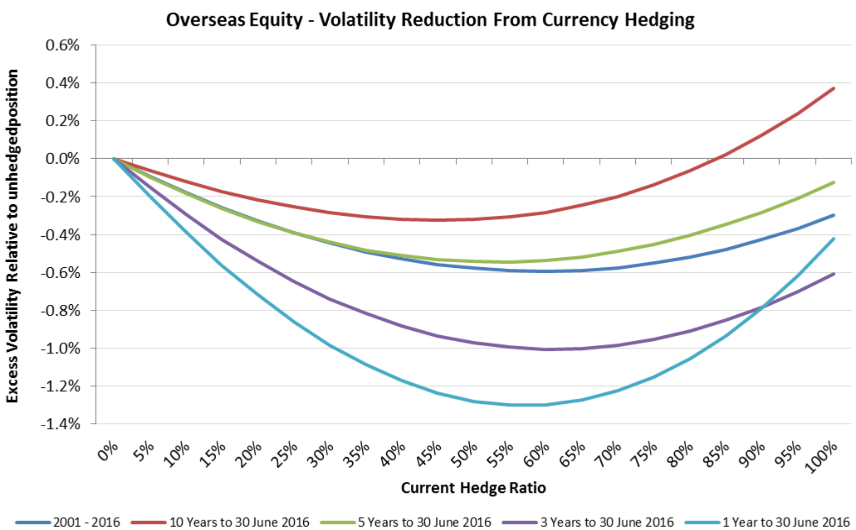
Additional considerations

- **Term of structure**: Could be aligned with strategic dates (e.g. valuation date) or rolling structures adopted
- **Market pricing:** Different structures may appear more attractive at different times

CURRENCY HEDGING

OVERVIEW





- Sterling has depreciated significantly against all major global currencies over recent months, due to the easing of UK monetary policy and uncertainty around 'Brexit'
- We estimate that the benefit of this to the Fund is in the order of £140m, as at mid November (compared to a fully hedged position)
- Given that sterling is currently at historic lows versus other major currencies (in particular the US$), we consider that market conditions represent a relatively attractive time to consider this issue and potentially implement a degree of currency hedging
- Currency movements represents a major source of risk to the funding position, given that around 48% of the Fund's assets are invested in overseas (non-UK) equities, whereas all of the liabilities are sterling based
- Implementing a degree of currency hedging exposure is expected to have risk-reduction benefits in the long term (as set out by the chart on the left)

IMPLEMENTATION

- The currency hedging could be implemented in a very straightforward and relatively inexpensive way through L&G
- Currency hedging would be concentrated on the Fund's equity exposure, as this represents the majority of currency risk
- We do recognise the potential downside of currency hedging. This would be the opportunity cost of missing out on further currency gains, should Sterling depreciate further
- We believe that this risk is mitigated by the fact that (1) we are only proposing a 50% currency hedging position on developed market equities (i.e. the Fund would still benefit if sterling fell further, but not to the same degree as would currently be case), and (2) currency hedging could be phased in over a period of time to reduce 'timing risk'
- In this regard, we believe it would be pragmatic to phase this in over a six month period (subject to further discussion)
- We have set out further information on our proposal in a separate paper for the Committee

Asset Class	Benchmark Allocation %	Comment
UK Equities	9.6	**No overseas exposure expected**
UK Long Lease Property	5.0	
North America Equity	13.9	**Introduce strategic 50% currency hedging policy**
Europe (ex-UK) Equity	4.7	
Japan Equity	2.2	
Asia Pac (ex Japan) Equity	2.2	
Global Low Carbon Equity	16.3	
World Emerging Markets Equities	8.6	**No change, due to additional cost and desire for exposure to long term appreciation of emerging market currencies**
Conventional Property	7.5	**Small exposure to overseas currencies expected. No hedge proposed due to 1) complexity/cost and 2) strategic exposure to currencies**
Multi-Sector Credit	5.0	
Infrastructure Debt	5.0	
Private Equity	5.0	
Total	**100.0**	**-**

IMPLEMENTATION CONSIDERATIONS

IMPLEMENTATION CONSIDERATIONS

Area of Consideration	Impact on expected risk	Impact on expected return	Timescale and Liquidity	Estimated fees	Implementation route
Multi-Asset	Low correlation to equities would provide diversification benefits, increasing risk-adjusted returns	Marginal decrease in return if funded from equities	No liquidity constraints; most funds are daily or weekly dealt	0.50-0.80% p.a.	Some options available on the London CIV
Hedge Funds	Low correlation to equities would provide diversification benefits, increasing risk-adjusted returns	Marginal decrease in return if funded from equities	Highly dependent on strategy. Some funds may have lock up clauses, or provision for 'gating' in stressed market conditions	1.0%-2.0% p.a. plus performance fee element	No options via the CIV at present. Priority unclear? Look to appoint own manager?
Equity Protection	Strategy would be provide explicit protection from equity market falls	Can be tailored to the requirements of the Fund. A degree of equity market upside likely to be sacrificed to offset cost of protection	Often implemented through 6 month or 1 year contracts, which can be expensive to exit	10-20bps p.a. on notional value of equities, plus option premium (strategy dependent)	Could be implemented with L&G. Not appropriate via CIV
Currency Hedging	Expected to reduce volatility over the medium to long term	Long-term expected return on equities would remain broadly the same. Potential to protect against a rebound in sterling over the short term	Highly liquid given proposed investment in weekly dealt currency hedged pooled funds	Additional management charges would be c. 2.5bps p.a. on currency hedged funds	Easy to implement with L&G under existing relationship
Private Debt	Good diversifier to listed equities	Dependent on the risk appetite of the Committee, but scope to maintain or increase expected return if funded from equities	Typically a closed ended structure with little/no illiquidity for the term of the investment	0.5% - 1.5% base fee with 10% to 20% performance fee. Fees typically charged on invested capital, but some managers charge based on committed capital	No options via the CIV at present. Look to appoint own manager?

MAKE TOMORROW, TODAY

MERCER